

Name: _____ Date _____ Period _____

Use **elimination** to solve the system of equations:

<p>Top: $-x + 2y = 12$ Bottom: $x + 6y = 20$</p> <p>Eliminate the x variable: $\begin{array}{r} -x + 2y = 12 \\ x + 6y = 20 \\ \hline \end{array}$</p> <p>Add the equations: $8y = 32$</p> <p>Divide by 8 to isolate y: $\frac{8y}{8} = \frac{32}{8}$</p> <p>Partial Solution: $y = 4$</p> <p>Now substitute 4 for y in both equations:</p> <table> <tr> <td>Top</td> <td>Bottom</td> </tr> <tr> <td>$-x + 2(4) = 12$</td> <td>$x + 6(4) = 20$</td> </tr> <tr> <td>$-x + 8 = 12$</td> <td>$x + 24 = 20$</td> </tr> <tr> <td>$x = -4$</td> <td>$x = -4$</td> </tr> </table> <p>Final Solution $(-4, 4)$</p>	Top	Bottom	$-x + 2(4) = 12$	$x + 6(4) = 20$	$-x + 8 = 12$	$x + 24 = 20$	$x = -4$	$x = -4$	<p>$3x + y = 5$ $2x - y = 10$</p>
Top	Bottom								
$-x + 2(4) = 12$	$x + 6(4) = 20$								
$-x + 8 = 12$	$x + 24 = 20$								
$x = -4$	$x = -4$								
<p>$x + 2y = 4$ $-x + y = -7$</p>	<p>$-x + 4y = 4$ $x + y = 6$</p>								

$$\begin{aligned}2x + y &= 1 \\ x + y &= 2\end{aligned}$$

$$\begin{aligned}5x - 4y &= 2 \\ -3x + 4y &= 2\end{aligned}$$

$$\begin{aligned}x + y &= -1 \\ 2x + y &= 3\end{aligned}$$

$$\begin{aligned}x + y &= 8 \\ 2x - y &= 7\end{aligned}$$

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Use **elimination** to solve the system of equations:

$$\begin{aligned}x - y &= 9 \\ x + y &= 7\end{aligned}$$

$$\begin{aligned}x + 3y &= 7 \\ 2x - 3y &= -4\end{aligned}$$

$$\begin{aligned}x - y &= 1 \\ 3x - y &= 3\end{aligned}$$

$$\begin{aligned}x + y &= 6 \\ -2x + y &= -3\end{aligned}$$

$$\begin{aligned}-x+6y&=18\\-x+2y&=6\end{aligned}$$

$$\begin{aligned}-x+y&=-3\\x+y&=5\end{aligned}$$

$$\begin{aligned}-5x+y&=-7\\3x+y&=1\end{aligned}$$

$$\begin{aligned}-3x+y&=1\\x+y&=5\end{aligned}$$